

Book A

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Accepted July 20, 1912

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BOOK 2242

FIELD NOTES

2242

OF THE SURVEY OF THE

Second Standard Parallel Norththrough Rgs. 1 and 2 E.

2242

2242

Of the Gila and Salt River Meridian,

Territory of Arizona.

AS SURVEYED BY

Alfred N. Oliver, United States Deputy Surveyor,

Under his Contract No. 161, dated January 5, 1910, 190

Survey commenced April 30, 1910, 190

Survey completed May 5, 1910., 190

2242

2242

40

1A

BOOK 2242

NAMES AND DUTIES OF ASSISTANTS.

Len Hall

Chainman

A. E. Lyon

Chainman

H. T. Hartwell

Chainman

F. J. Cornick

Chainman

R. A. Coombs

Flagman.

BOOK 2242

INDEX DIAGRAM.

Township 9 N., Range 1 E.

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Second Standard Parallel N. through R. 1 E.
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Second Standard Parallel N. through R 2 E

PRELIMINARY OATHS OF ASSISTANTS.

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BOOK 2242
C

WE, Len. Hall, A.E. Lyon, H. T. Hartwell and F. J. Mc Cormick
do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain upon even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of the second Standard Parallel North, through Ranges 1 and 2 E.

Len Hall , Chairman.
A. E. Lyon , Chairman.
H. T. Hartwell , Chairman.
F. J. McCormick , Chairman.
Alfred N. Oliver
U. S. Deputy Surveyor.

Subscribed and sworn to before me this 30th.
day of April, 1910, 190



WE, _____ and _____
do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of _____

_____, Moundman.
_____, Moundman.

Subscribed and sworn to before me this _____ }
day of _____, 190 }



WE, _____ and _____
do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of _____

_____, Axman.
_____, Axman.

Subscribed and sworn to before me this _____ }
day of _____, 190 }



I, R. A. Coombs, do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of the Second Standard Parallel North, through Ranges 1 and 2 E.

R. A. Coombs , Flagman.
Alfred N. Oliver
U. S. Deputy Surveyor.

Subscribed and sworn to before me this 30th.
day of April, 1910., 190



No notary available without loss of time and great expense.

Second Standard Parallel North, Through Rg. 1 E.

Survey commenced April 30, 1910, and executed with a Lietz Co. light mountain transit, No. 5631, with solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other, reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The instrument was examined tested on the true meridian at Phoenix, found correct, and was approved by the surveyor general for Arizona

I examine the adjustments of the transit, and find them correct; then, to test the solar apparatus, by comparing its indications, resulting from solar observations made during a.m., and p.m., hours, with a meridian determined by observations on Polaris, I proceed as follows:

At the standard cor. of Ts. 9 N., Rgs. 1 E. and 1 W. which is a granite stone 14 x 12 x 7 ins above ground, firmly set and marked and witnessed as described by the surveyor general: latitude $34^{\circ} 04' 21''$ N.; longitude $112^{\circ} 18' 24''$ W.; I set off $34^{\circ} 04\frac{1}{2}'$ N. on the lat. arc; $14^{\circ} 46'$ N. on the decl. arc; and at 5h. oom. p.m., l.m.t. determine with the solar a meridian and mark a point therof, on a stone firmly set in the ground, 5 chs. N. of the cor.

April 30, 1910.

May 1: At 4h. 57m.a.m. by my watch, which has correct l.m.t., I observe Polaris at eastern elongation, in accordance with Manual of Instructions, and mark a point in the line thus determined, on a peg driven in the ground, 5 chs. N. of my station.

At 6 a.m., l.m.t., I lay off the azimuth of Polaris, $1^{\circ} 25'$ to the west, and mark the meridian thus determined by cutting a small groove in the stone set April 30, on which the meridian coincides with the mark determined by the solar.

At 7h. 00m. a.m., l.m.t., I set off $34^{\circ} 04\frac{1}{2}'$ N. on the lat. arc; $14^{\circ} 56\frac{1}{2}'$ N. on the decl. arc; and mark a point in the meridian determined with the solar, by a cross on the stone already set 5 chs. N. of my station; this mark coincides with the meridian established by the Polaris observation.

The solar apparatus, by p.m., and a.m., observations defines positions for meridians, respectively, which agree with the meridian established by the Polaris observation; therefore, I conclude that the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian, at 7h. 10m. a.m., is N. $14^{\circ} 30'$ W.; the angle thus determined gives the mag. decl. $14^{\circ} 30'$ E.

From the standard cor. of Tps. 9 N. Rgs. 1 E. and 1 W. already described, I run

East, on S. bdy. of sec. 31.

Ascend steep, rocky west slope of ridge covered with loose rock.

10.74 Ridge N. and S. and descend

28.00 Cross wash 20 lks. wide course S. W. and ascend.

39.20 Cross drain 5 lks. wide course S. W.

Difference between measurements of 40.00 chs. by two sets of chainmen, is 10 lks; position of middle point

By 1st. set 39.95 chs.

By 2nd. set 40.05 chs.; the mean of which is

40.00 Set a granite stone 20 x 8 x 6 ins. 15 ins. in the ground for standard $\frac{1}{4}$ sec. cor., marked $SC\frac{1}{4}$ on N. face; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.

54.90 Ridge bears N. and S. and descend.

Second Standard Parallel North, Through Range 1 East.

63.00 Cross wash 20 lks. wide course S. E. and ascend.
76.00 Ridge bears N. and S. and descend.
79.00 Cross wash 20 lks. wide course S. E.
Difference between measurements of 80.00 chs., by two sets of chainmen, is 16 lks.; position of middle point
By 1st. set 79.92 chs.
By 2nd. set 80.08 chs.; the mean of which is
80.00 Set a granite stone 18 x 8 x 8 ins. 12 ins. in the ground for standard cor. of secs. 31 and 32, marked SC on N. with 5 grooves on E. and 1 groove on W. faces; and raise a mound of stone 2 ft. base 1 1/2 ft. high, N. of cor. Pits impracticable.
Land, rough and mountainous, covered with loose rocks. Soil, rocky; 4th. rate.
No timber.
Undergrowth, mesquite, paloverde, catclaw and oak brush. Mountainous land, land covered with dense undergrowth and loose rocks, exceptionally difficult to survey 80.00 chs.

East on S. bdy. of sec. 32
Ascending steep S. W. slope of ridge covered with loose rocks, through dense brush.
16.00 Ridge bears N. E. and S. W. descend.
23.15 Cross wash 25 lks. wide course S. E. ascend.
33.50 Cross ridge bears N. W. and S. E. and descend.
Difference between measurements of 40 chs. by two sets of chainmen is 8 lks.; position of middle point
By 1st. set, 39.96 chs.
By 2nd. set, 40.04 chs.; the mean of which is
40.00 Set a granite stone 20 x 12 x 6 ins. 15 ins. in the ground for standard 1/4 sec. cor., marked SC 1/4 on N. face; and raise a mound of stone 2 ft. base 1 1/2 ft. high, N. of cor. Pits impracticable.
45.50 Cross wash 15 lks. wide course S. E. ascend.
50.00 Ridge bears N. and S. descend.
61.00 Drain 6 lks. wide course S. E. ascend.
62.00 Spur runs S. E. descend.
65.40 Cross wash 50 lks. wide course S.
Difference between measurements of 80.00 chs. by two sets of chainmen is 14 lks.; position of middle point
By 1st. set, 79.93 chs.
By 2nd. set, 80.07 chs.; the mean of which is
80.00 Mark a cross on a granite rock in place 3 ft. by 2 ft. by 5 ft. above ground, for exact point for standard cor. of secs. 32 and 33, marked SC on N. with 4 grooves on E. and 2 grooves on W. of cross; and raise a mound of stone 2 ft. base 1 1/2 ft. high, N. of cor. Pits impracticable.
Land, rough and mountainous and covered with loose rock. Soil, rocky; 4th. rate.
No timber.
Undergrowth, Paloverde, mesquite, catclaw and scrub oak. Mountainous land and land covered with dense undergrowth and loose rock, exceptionally difficult to survey 80.00 chs.
May 1; at this cor. I set off 14° 59 1/2' N. on the decl. arc; and observe the sun on the meridian at noon; the resulting lat. is 34° 04 1/2' N.

East on S. bdy. of sec. 33.
Ascending rocky S. W. slope through dense undergrowth and over loose rocks.
7.00 Ridge bears N. and S. descend.
11.60 Cross over mining shaft.
12.75 Cross drain 6 lks. wide course S. ascend.

Second Standard Parallel North, through Range 1 East

Chains.	
17.40	Ridge bears N. and S. descend.
21.40	Cross wash 25 lks. wide course S. W. ascend.
22.50	Stone house bears N. 50 lks.
	Difference between measurements of of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point
	By 1st. set 39.98 chs.
	By 2nd. set 40.02 chs.; the mean of which is
40.00	Set a Schist stone 24 x 10 x 8 ins. 18 ins. in the ground for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
59.00	Saddle in high rocky mountain ridge bears N. and S. descend.
76.50	Cross wash 10 lks. wide course N. E.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point
	By 1st. set, 79.95 chs.
	By 2nd. set, 80.05 chs.; the mean of which is
80.00	Set a granite stone 18 x 10 x 6 ins. 12 ins. in the ground for standard cor. of secs. 33 and 34, marked SC on N. with 3 grooves on E. and W. faces; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
	Land, mountainous and covered with loose rock.
	Soil, rocky; 4th. rate.
	No timber.
	Undergrowth, paloverde, mesquite and scrub oak.
	Mountainous land and land covered with dense undergrowth and loose rock, exceptionally difficult to survey 80.00 chs.
	May 1, 1910.
	May 2: At 7h. 00m. a.m., 1.m.t., I set off $34^{\circ} 04\frac{1}{2}'$ N. on the lat. arc; $15^{\circ} 13'$ N. on the decl. arc; and determine a meridian with the solar at the standard cor. of secs. 33 and 34,
	Thence I run
	East on S. bdy. of sec. 34
	Descending N. E. slope of mountain through dense brush over loose rock.
5.60	Cross drain 6 lks. wide course N. E. ascend.
12.00	Spur extends N. E. and descend.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point
	By 1st. set, 39.96 chs.
	By 2nd. set, 40.04 chs.; the mean of which is
40.00	Set a granite stone 32 x 8 x 6 ins. 24 ins. in the ground for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
46.50	Cross wash 30 lks. wide course S. E. and ascend.
49.50	Ridge bears N. and S.
54.00	Cross boulder Creek, dry, water in tanks, 40 lks. wide course S. E. and ascend.
	Difference between measurements of 80 chs. by two sets of chainmen is 12 lks.; position of middle point
	By 1st. set, 79.94 chs.
	By 2nd. set, 80.06 chs.; the mean of which is
80.00	Mark a cross on a granite rock in place 3 x $2\frac{1}{2}$ x 2 ft. above ground for exact point for standard cor. of secs. 34 and 35, marked SC on N. with 2 grooves on E. and 4 grooves on W. of cross; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
	Land, rough and mountainous and covered with loose rock.
	Soil, rocky; 4th. rate.

Second Standard Parallel North through Range 1 East

Chains.	No timber Undergrowth, catclaw and scrub oak. Mountainous land and land covered with dense undergrowth and loose rock, exceptionally difficult to survey, 80.00 chs.
1.80	East on S. bdy. of sec. 35 Ascending steep W. slope, through dense brush, over loose rock.
37.75	Ridge bears N. and S. and along S. slope of mountains. Ridge bears N. and S. and descend E. slope. Difference between measurements of 40 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st. set, 39.97 chs. By 2nd. set, 40.03 chs.; the mean of which is
40.00	Mark a cross on a granite rock in place 4 x 3½ x 1½ ft. above ground, for exact point for standard ¼ sec. cor., marked SC¼ on N. of cross; and raise a mound of stone 2 ft. base 1½ ft. high N. of cor. Pits impracticable.
63.00	Cross wash 15 lks. wide course S. E. ascend.
65.00	Ridge bears N. and S. descend.
66.50	Cross wash 20 lks. wide course S. E. and ascend. Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st. set, 79.95 chs. By 2nd. set, 80.05 chs.; the mean of which is
80.00	Set a granite stone 18 x 12 x 10 ins. 12 ins. in the ground for standard cor. of secs. 35 and 36, marked SC on N. with 1 groove on E. and 5 grooves on W. faces; and raise a mound of stone 2 ft. base 1½ ft. high, N. of cor. Pits impracticable. Land, rough and mountainous and covered with loose rock. Soil, rocky; 4th. rate. No timber. Undergrowth, catclaw and oak. Mountainous land and land covered with dense undergrowth and loose rock, exceptionally difficult to survey 80.00 chs. May 2: At this cor. I set off 15° 17½' N. on the decl. arc; and observe the sun on the meridian at noon; the resulting lat. is 34° 04½' N.
12.00	East on S. bdy. of sec. 36. Ascend steep S. W. slope of mountain, through dense brush, over loose rocks.
24.70	Ridge bears N. and S. descend.
32.00	Cross drain 5 lks. wide course, S. W. ascend Granite ridge bears N. and S. descend. Difference between measurements of 40.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st. set, 39.95 chs. By 2nd. set, 40.05 chs.; the mean of which is
40.00	Mark a cross on a granite rock in place 18 x 12 x 12 ins. above ground, for standard ¼ sec. cor., marked SC¼ on N. of cross; and raise a mound of stone 2 ft. base 1½ ft. high N. of cross; pits impracticable.
55.00	Cross drain 6 lks. wide course N. E. ascend.
68.00	Saddle between granite peaks bears N. and S. Difference between measurements of 80.00 chs. by two sets of chainmen is 14 lks.; position of middle point By 1st. set 79.93 chs. By 2nd. set 80.07 chs.; the mean of which is
80.00	Mark a cross on a granite rock in place 10 x 6 x 5 ft. above ground, for exact point for standard cor. of Tp. 9 N. Rgs. 1 and 2 E., marked SC on N. with 6 grooves

Second Standard Parallel North, through Range 1 East.

Chains. On N., E., and W. of cross, and 9N on N. 2E. on E., and 1E on W. of cross; and raise a mound of stone 2 ft. base 1½ ft. high, N. of cor. Pits impracticable. Land, rough and mountainous, and covered with loose rock. Soil, rocky; 4th. rate. No timber. Undergrowth, Catclaw and oak. Mountainous land and land covered with dense undergrowth and loose rocks, exceptionally difficult to survey 80.00 chs.

May 2, 1910

Second Standard Parallel North, through Range 2 East

Chains.	May 3: At 7h. 00m. a.m., l.m.t., I set off $34^{\circ} 04\frac{1}{2}'$ N. ✓ on the lat. arc; $15^{\circ} 33'$ N. ✓ on the decl. arc; and determine a meridian with the solar at the standard cor. of Tps. 9 N. Rgs. 1 and 2 E. Thence I run East on S. bdy. of sec. 31 Descending over huge granite boulders; through dense brush.
12.50	Cross wash 25 lks. wide course S. E. and ascend.
21.10	Ridge bears N. W. and S. E. Difference between measurements on 40.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st. set, 39.95 chs. By 2nd. set, 40.05 chs.; the mean of which is
40.00	Set a granite stone 20 x 10 x 4 ins. 15 ins. in the ground for standard $\frac{1}{4}$ sec. cor., marked $SC\frac{1}{4}$ on N. face; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high N. of cor. Pits impracticable.
45.00	Leave granite boulders and over loose rocks.
54.75	Cross drain 6 lks. wide course S. E.
59.25	Cross same drain, course N. E.
65.70	Cross same drain, course S. E. ascend.
68.00	Ridge bears N. W. and S. E.
72.45	Cross wash 30 lks. wide course S. E. ascend.
78.20	Ridge bears N. and S. descend. Difference between measurements of 80.00 chs. by two sets of chainmen is 16 lks.; position of middle point By 1st. set, 79.92 chs. By 2nd. set, 80.08 chs.; the mean of which is
80.00	Set a schist stone 20 x 8 x 4 ins. 15 ins. in the ground for standard cor. of secs. 31 and 32, marked SC on N. with 5 grooves on E. and 1 groove on W. faces; from which A paloverde 6 ins. diam., bears N. 43° E. 39 lks. dist., marked SCT9NR2ES32BT. An ironwood 10 ins. diam., bears N. $76\frac{1}{2}^{\circ}$ W. 76 lks. dist., marked SCT9NR2ES31BT. Land, rough and mountainous and covered with loose rocks and hugh boulders. Soil, rocky; 4th. rate. No timber. Undergrowth, mesquite, catclaw, ironwood and oak. Mountainous land and land covered with dense undergrowth and loose rock and boulders, exceptionally difficult to survey 80.00 chs.

	East on S. bdy. of sec. 32 Descending through dense brush over loose rocks.
0.15	Cross drain 5 lks. wide course S. ascend.
4.00	Ridge bears N. and S. and descend.
10.50	Cross wash 35 lks. wide course S.
27.00	Ridge bears N. and S. descend. Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st. set, 39.98 chs. By 2nd. set, 40.02 chs.; the mean of which is
40.00	Set a quartzite stone 18 x 10 x 4 ins. 12 ins. in the ground for standard $\frac{1}{4}$ sec. cor., marked $SC\frac{1}{4}$ on N. face; from which A mesquite 12 ins. diam., bears N. $31\frac{1}{4}^{\circ}$ W. 106 lks. dist., marked $SC\frac{1}{4}$ S32BT. A paloverde 5 ins. diam., bears N. $8\frac{1}{2}^{\circ}$ E. 170 lks. dist., marked $SC\frac{1}{4}$ S32BT.
43.45	Cross drain 5 lks. wide course N. E.
49.00	Cross same drain course S. E. ascend.
56.00	Ridge bears N. and S. descend.
63.40	Cross drain course S. W.

Second Standard Parallel North, through Range 2 East.

Chains.	
70.00	Ridge bears N. and S. descend. Difference between measurements of 80.00 chs. by two sets of chainmen is 12 lks.; position of middle point By 1st. set 79.94 chs. By 2nd. set 80.06 chs.; the mean of which is
80.00	Set a Schist stone 20 x 8 x 4 ins. 15 ins. in the ground for standard cor. of secs. 32 and 33, marked SC on N. face, with 4 grooves on E. and 2 grooves on W. faces; from which A paloverde 8 ins. diam., bears N. $73\frac{1}{2}^{\circ}$ E. 170 lks. dist., marked SCT9NR2ES33BT. A paloverde 4 ins. diam., bears N. 21° W. 76 lks. dist., marked SCT9NR2ES32BT. Land, mountainous and covered with loose rocks. Soil, rocky; 4th. rate. No timber. Undergrowth, paloverde, catclaw and oak. Mountainous land and land covered with dense undergrowth and loose rocks, exceptionally difficult to survey 80.00 chs.
	May 3, 1910.
	May 4: At 7h. 00m., a.m., l.m.t., I set off $34^{\circ} 04\frac{1}{2}'$ N. on the lat. arc; $15^{\circ} 50\frac{1}{2}'$ N. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 32 and 33 Thence I run. East on S. bdy. of secs. 33 Descending through dense brush over loose rocks.
19.50	Cross wash 25 lks. wide course S. E. and ascend.
25.60	Ridge bears N. and S. descend. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st. set, 39.96 chs. By 2nd. set, 40.04 chs.; the mean of which is
40.00	Set a granite stone 18 x 8 x 6 ins. 12 ins. in the ground for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; from which A paloverde 4 ins. diam., bears N. $21\frac{1}{4}^{\circ}$ W. 159 lks. dist., marked SC $\frac{1}{4}$ S33BT. A mesquite 5 ins. diam., bears N. 53° E. 86 lks. dist., marked SC $\frac{1}{4}$ S33BT.
44.00	Right bank of Agua Fria River.
45.50	Center of running water in river bed, 100 lks. wide course S.
53.93	Cross road bears N. W. and S. E.
55.00	Center of running water in river bed, 100 lks. wide course N. W.
58.00	Right bank of river.
58.32	Fence bears N. W. and S. E. Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st. set 79.95 chs. By 2nd. set 80.05 chs.; the mean of which is
80.00	Set a malpais stone 18 x 8 x 8 ins. 12 ins. in the ground for standard cor. of secs. 33 and 34, marked SC on N. with 3 grooves on E. and W. faces; from which A paloverde 6 ins. diam., bears N. $84\frac{1}{4}^{\circ}$ E 28 lks. dist., marked SCT9NR2ES34BT. A mesquite 5 ins. diam., bears N. 70° W. 22 lks. dist., marked T9NR2ES33BTSC. Land, mountainous and covered with loose rocks. Soil, rocky; 4th. rate. No timber. Undergrowth, paloverde, mesquite and oak.

Second Standard Parallel North, through Range 3 East

Chains.	<p>Mountainous land and land covered with dense undergrowth and covered with loose rocks, exceptionally difficult to survey 80.00 chs.</p> <p>May 4: At this cor. I set off 15° 53' N. on the decl. arc; and observe the sun on the meridian at noon, the resulting lat. is 34° 04½' N.</p>
	<hr/>
	<p>East on S. bdy. of sec. 34.</p> <p>Over level land through mesquite brush so dense as to be exceptionally difficult to survey.</p>
8.50	Cross fence bears N. E. and S. W.
10.00	Right bank of Agua Fria River.
16.40	Center of running water in river bed 50 lks. wide course S. W.
18.20	Left bank of Agua Fria River.
18.35	Irrigation ditch 6 lks. wide course S. W.
19.80	Fence bears N. E. and S. W.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point
	By 1st. set 39.97 chs.
	By 2nd. set 40.03 chs.; the mean of which is
40.00	Set a granite stone 18 x 8 x 6 ins. 12 ins. in the ground for standard ¼ sec. cor., marked SC¼ on N. face; from which
	A mesquite 20 ins. diam., bears N. 45° E. 85 lks. dist., marked SC¼S34BT.
	A catclaw 6 ins. diam., bears N. 36¼° W. 148 lks. dist., marked SC¼S34BT.
45.45	Cross road bears N. E. and S. W.
51.95	Fence bears N. and S.
52.61	S. W. cor. of E. L. Hildebrand's house.
53.08	N. E. cor. of store.
53.48	Fence bears N. W. and S. E.
53.60	Road bears N. and S.
55.37	Cor of barn bears N. 100 lks.
59.00	Corral bears S. 50 lks.
64.40	Cross wash 10 lks. wide course N. W.
66.70	Cross wash 15 lks. wide course N. W. ascend.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 14 lks.; position of middle point
	By 1st. set 79.93 chs.
	By 2nd. set 80.07 chs.; the mean of which is
80.00	Set a malpais stone 20 x 10 x 6 ins. 15 ins. in the ground for standard cor. of secs. 34 and 35, marked SC on N. with 2 grooves on E. and 4 grooves on W. faces; from which
	A mesquite 7 ins. diam., bears N. 25° E. 165 lks. dist., marked SCT9NR2E835BT.
	A mesquite 6 ins. diam., bears N. 84¼° W. 76 lks. dist., marked SCT9NR2E834BT.
	Land, level and mountainous.
	Soil, rocky and sandy; 2nd. and 4th. rate.
	No timber.
	Undergrowth paloverde, mesquite and catclaw.
	Mountainous land, and land covered with dense undergrowth exceptionally difficult to survey 80.00 chs.
	May 4, 1910.
	<hr/>
	<p>May 5: At 7h. 00m., a.m., l.m.t., I set off 34° 04½' N. on the lat. arc; 16° 08' N. on the decl. arc; and determine a meridian with the solar at the standard cor. of secs. 34 and 35</p> <p style="padding-left: 40px;">Thence I run</p> <p>East on S. bdy. of sec. 35</p>

Second Standard Parallel North, through Range 3 East.

Chains.	Over rolling land covered with loose rocks, through dense brush.
0.40	Cross wash 20 lks. wide course N. W.
5.00	Ridge bears N. and S.
8.45	Cross wash 20 lks. wide course N. W.
16.40	Cross wash 100 lks. wide course N.
33.40	Cross wash 30 lks. wide course N.
37.30	Cross wash 30 lks. wide course N.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st. set 39.98 chs. By 2nd. set 40.02 chs.; the mean of which is
40.00	Set a malpais stone 18 x 10 x 6 ins. 12 ins. in the ground for Standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; from which A paloverde 5 ins. diam., bears N. $14\frac{1}{2}^{\circ}$ E. 97 lks. dist., marked SC $\frac{1}{4}$ S35BT. A paloverde 5 ins. diam., bears N. $27\frac{3}{4}^{\circ}$ W. 98 lks. dist., marked SC $\frac{1}{4}$ S35BT.
53.00	Cross wash 50 lks. wide course N. W. Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st. set 79.97 chs. By 2nd. set 80.03 chs.; the mean of which is
80.00	Set a malpais stone 18 x 10 x 6 ins. 12 ins. in the ground for standard cor. of secs. 35 and 36, marked SC on N. with 1 groove on E. and 5 grooves on W. faces; from which A paloverde 4 ins. diam., bears N. 17° W. 50 lks. dist., marked SCT9NR3ES35BT. No other tree available. Raise a mound of stone 2 ft. base base $1\frac{1}{2}$ ft. high N. of cor. Pits impracticable. Land, rolling and covered with loose rock. Soil, rocky; 4th. rate. No timber. Undergrowth, greasewood, paloverde, mesquite and catclaw. Land covered with dense undergrowth and loose rocks, exceptionally difficult to survey 80.00 chs. May 5: At thsi cor. I set off $16^{\circ} 10\frac{1}{2}'$ N. on the decl. arc; and observe the sun on the meridian at noon; the resulting lat. is $34^{\circ} 04\frac{1}{2}'$ N.
	East on S. bdy. of sec. 36.
35.00	Ascending through dense brush over loose rocks. Ridge bears N. and S. and along N. slope of mountain. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st. set 39.96 chs. By 2nd. set 40.04 chs.; the mean of which is
40.00	Set a malpais stone 18 x 12 x 5 ins. 12 ins. in the ground for standard $\frac{1}{4}$ sec. cor., marked SC $\frac{1}{4}$ on N. face; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high, N. of cor. Pits impracticable.
63.00	Ridge bears N. Malpais peak S. about 150 lks. and along S. slope of mesa. Difference between measurements of 80.00 chs. by two sets of chainmen is 20 lks.; position of middle point By 1st. set 79.90 chs. By 2nd. set 80.10 chs.; the mean of which is
80.00	Set a malpais stone 20 x 10 x 10 ins. 15 ins. in the ground for standard cor. of Tps. 9 N. Rgs. 2 and 3 E. marked SC9N on N. 3E on E. and 2E on W. faces, with 6 grooves on N. E. and W. faces; and raise a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high N. of cor. Pits impracticable. Land, mountainous and covered with loose rocks. Soil; rocky; 4th rate. No timber.

Second Standard Parallel North, through Range 2 E.

Chains.

Undergrowth, Greasewood, paloverde and catclaw. Mountainous land and land covered with dense undergrowth and loose rocks, exceptionally difficult to survey 80.00 chs.

May 5, 1910.

GENERAL DESCRIPTION.

Through range 1 and the west half of range 2 this line runs over high mountain ridges having a southerly trend. The east half of range 2 is over rolling land.

The land on both sides of the line is rough and mountainous.

Alfred N. Oliver
U.S. Deputy Surveyor.

LIST OF NAMES.

A list of the names of the individuals employed by Alfred N. Oliver

....., United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of the Second Standard Parallel North, through Ranges 1 and 2 East.

showing the respective capacities in which they acted:

Len. Hall , *Chainman.*

A. E. Lyon , *Chainman.*

H. T. Hartwell , *Chainman*

F. J. Bonnick , *Chainman*
Chainman

..... , *Arman.*

..... , *Arman.*

R. A. Coombs. , *Flagman.*

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Alfred N. Oliver

....., United States Deputy Surveyor, in surveying all those parts or portions of the the Second Standard Parallel North, through Ranges 1 and 2 East

..... of the Gila and Salt River meridian, Territory of Arizona

....., which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor

General for Arizona.

Len Hall , *Chainman.*

A. E. Lyon , *Chainman.*

H. T. Hartwell , *Chainman*

F. J. Bonnick , *Chainman*

..... , *Arman.*

..... , *Arman.*

R. A. Coombs. , *Flagman.*

Subscribed and sworn to before me this 5th. day of May, 1910., 190

Alfred N. Oliver
U.S. Deputy Surveyor.



No notary available without loss of time and great expense.

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

54 (12)
BOOK 2242

I, Alfred N. Oliver, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from Frank S. Ingalls United States Surveyor General for Arizona, bearing date of the 5th day of January, 1910, 1910, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for Arizona, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the Second Standard Parallel North, through Ranges 1 and 2 East

of the Gila and Salt River meridian, in the Territory of Arizona, which are represented in the foregoing field notes as having been surveyed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the United States Surveyor General for Arizona, and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Alfred N. Oliver
United States Deputy Surveyor.

Subscribed by said Alfred N. Oliver, and sworn to before me }
this 26th day of July, 1910

Frank S. Ingalls
U.S. Surveyor General



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Horace A. Cox July 11, 1911
The foregoing field notes of the survey of the Second Standard Parallel North through Ranges 1 and 2 East

executed by Alfred N. Oliver U.S. Dep. Sur. under his contract No. 161, dated July 5 - 1910, 1910, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank S. Ingalls
United States Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in _____, has been correctly copied from the original notes on file in this office.

United States Surveyor General.